

WHAT IS CLAIMED IS:

1. A kit for transdermal or intradermal delivery of at least one substance, the kit comprising:

5 (a) a dermal patch which comprises an electrochemical cell having at least two electrodes positioned on one side of the dermal patch, said electrodes being for forming electrical contact with a skin portion of a subject; and

(b) at least one retainer for retaining a conductive fluid containing a said at least one substance, said conductive fluid being for deposition on at least one of said at least two electrodes and/or topical application onto the skin portion of the
10 subject;

said patch being designed and configured for delivering an electric current through the skin and said conductive fluid, said electric current being for transdermal or intradermal delivery of said at least one substance.

15 2. The kit of claim 1, wherein said conductive fluid is an aqueous based fluid.

3. The kit of claim 1, wherein said conductive fluid is a hydrogel.

20 4. The kit of claim 1, wherein said conductive fluid is selected from the group consisting of a gel, a cream, a paste, a lotion, a suspension, an emulsion and a solution.

5. The kit of claim 1, wherein said conductive fluid is for deposition on
25 at least one of said at least two electrodes.

6. The kit of claim 1, wherein said conductive fluid is for topical application to the skin portion of the subject.

7. The kit of claim 1, wherein said at least one substance is a charged substance.

8. The kit of claim 1, wherein said at least one substance is an
5 uncharged substance.

9. The kit of claim 1, wherein said electric current is for causing iontophoresis, electrophoresis, electroporation or any combination thereof.

10. The kit of claim 1, wherein said at least one substance is selected
10 from the group consisting of a pharmaceutical, a cosmetic and a cosmeceutical.

11. The kit of claim 10, wherein said pharmaceutical is selected from the group consisting of a therapeutic and an anesthetic.

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12. The kit of claim 1, wherein said retainer is a separator for deposition upon the skin portion such that, upon contact by said separator with at least one of said at least two electrodes, said electric current causes said transdermal or intradermal delivery of said at least one substance.

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13. The kit of claim 1, wherein said retainer is a separator for deposition on at least one of said at least two electrodes such that, upon contact by said separator with the skin portion, said electric current causes said transdermal or intradermal delivery of said at least one substance.

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14. The kit of claim 12, wherein said separator is contained in a removable cover.

15. The kit of claim 1, wherein said retainer is selected from the group consisting of a vessel, a tube, a jar, a container, a dispenser and an ampoule.

16. The kit of claim 1, wherein said at least two electrodes are integrally
5 formed with said electrochemical cell.

17. The kit of claim 1, wherein said electrochemical cell and said at least two electrodes are the sole constituents of said patch.

10 18. The kit of claim 1, wherein the dermal patch further comprises an attachment mechanism for attaching to the skin portion of the subject.

19. The kit of claim 1, wherein at least one electrode of said at least two electrodes is for mobilizing said at least one substance.

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20. The kit of claim 1, wherein the dermal patch further comprises a circuitry for controlling said electric current.

21. The kit of claim 1, wherein said electrochemical cell is a flexible thin
20 layer electrochemical cell.

22. The kit of claim 1, wherein said electrochemical cell is a flexible thin layer open liquid state electrochemical cell which comprises a first layer of insoluble negative pole, a second layer of insoluble positive pole and a third layer of aqueous
25 electrolyte, said third layer being disposed between said first and second layers and including:

- (a) a deliquescent material for keeping the open cell wet at all times;
- (b) an electroactive soluble material for obtaining required ionic conductivity; and

(c) a water-soluble polymer for obtaining a required viscosity for adhering said first and said second layers to said third layer.

5 23. The kit of claim 2 for use in the treatment of hyperhidrosis.

24. A kit for introduction of current and/or voltage to a skin portion of a subject, the kit comprising:

(a) a dermal patch comprising an electrochemical cell having at least two electrodes positioned on one side of the dermal patch, said electrodes being for
10 forming electrical contact with the skin portion of the subject; and

(b) at least one retainer for retaining a conductive fluid, said conductive fluid being for deposition on at least one of said at least two electrodes and/or for topical application onto the skin portion of the subject;

said patch being designed and configured for delivering an electric current
15 through the skin and said conductive fluid, said electric current being for introduction of current and/or voltage to the skin portion of the subject.

25. The kit of claim 24, wherein said conductive fluid is an aqueous based fluid.

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26. The kit of claim 24, wherein said conductive fluid is a hydrogel.

27. The kit of claim 24, wherein said conductive fluid is selected from the group consisting of a gel, a cream, a paste, a lotion, a suspension, an emulsion
25 and a solution.

28. The kit of claim 24, wherein said conductive fluid is for deposition on at least one of said at least two electrodes.

29. The kit of claim 24, wherein said conductive fluid is for topical application to the skin portion of the subject.

30. The kit of claim 24, wherein said retainer is a separator for deposition
5 upon the skin portion.

31. The kit of claim 24, wherein said retainer is a separator for deposition on at least one of said at least two electrodes.

10 32. The kit of claim 24, wherein said separator is contained in a removable cover.

33. The kit of claim 24, wherein said retainer is selected from the group consisting of a vessel, a tube, a jar, a container, a dispenser and an ampoule.

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34. The kit of claim 24, wherein said at least two electrodes are integrally formed with said electrochemical cell.

35. The kit of claim 24, wherein said electrochemical cell and said at
20 least two electrodes are the sole constituents of said patch.

36. The kit of claim 24, wherein the dermal patch further comprises an attachment mechanism for attaching to the skin portion of the subject.

25 37. The kit of claim 24, wherein the dermal patch further comprises a circuitry for controlling said electric current.

38. The kit of claim 24, wherein said electrochemical cell is a flexible thin layer electrochemical cell.

39. The kit of claim 24, wherein said electrochemical cell is a flexible
5 thin layer open liquid state electrochemical cell which comprises a first layer of insoluble negative pole, a second layer of insoluble positive pole and a third layer of aqueous electrolyte, said third layer being disposed between said first and second layers and including:

- (a) a deliquescent material for keeping the open cell wet at all times;
- 10 (b) an electroactive soluble material for obtaining required ionic conductivity; and
- (c) a water-soluble polymer for obtaining a required viscosity for adhering said first and said second layers to said third layer.

15 40. The kit of claim 24, packaged and identified for an application selected from the group consisting of a wound healing application, a scar prevention application, a scar reduction application a tissue repair application and a tissue regeneration application.

20 41. A device for introduction of current and/or voltage to a skin portion of a subject, the device comprising:

a dermal patch comprising an electrochemical cell having at least two electrodes positioned on one side of the dermal patch, said electrodes being for forming electrical contact with the skin portion of the subject; and

25 said patch being designed and configured for delivering an electric current through the skin, said electric current being for introduction of current and/or voltage to the skin portion of the subject.

30 42. The device of claim 41, wherein said at least two electrodes are integrally formed with said electrochemical cell.

43. The device of claim 41, wherein said electrochemical cell and said at least two electrodes are the sole constituents of said patch.

5 44. The device of claim 41, wherein the dermal patch further comprises an attachment mechanism for attaching to the skin portion of the subject.

 45. The device of claim 41, wherein the dermal patch further comprises a
10 circuitry for controlling said electric current.

46. The device of claim 41, wherein said electrochemical cell is a flexible thin layer electrochemical cell.

15 47. The device of claim 41, wherein said electrochemical cell is a flexible thin layer open liquid state electrochemical cell which comprises a first layer of insoluble negative pole, a second layer of insoluble positive pole and a third layer of aqueous electrolyte, said third layer being disposed between said first and second layers and including:

- 20 (a) a deliquescent material for keeping the open cell wet at all times;
- (b) an electroactive soluble material for obtaining required ionic conductivity; and
- (c) a water-soluble polymer for obtaining a required viscosity for adhering said first and said second layers to said third layer.

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48. The device of claim 41, packaged and identified for an application selected from the group consisting of a wound healing application, a tissue repair application, a tissue regeneration application, and an electrical stimulation application.

49. The device of claim 41 for the treatment of hyperhidrosis.

50. A kit for treatment of hyperhidrosis, the kit comprising:

(a) a dermal patch which comprises an electrochemical cell having at least two electrodes positioned on one side of the dermal patch, said electrodes being for forming electrical contact with a skin portion of a subject; and

(b) at least one retainer for retaining a conductive fluid containing at least one substance, said conductive fluid being for deposition on at least one of said at least two electrodes and/or topical application onto the skin portion of the subject;

said patch being designed and configured for delivering an electric current through the skin and said conductive fluid, said electric current being for treatment of hyperhidrosis.

51. The kit of claim 50, wherein said conductive fluid contains water.

52. The kit of claim 50, wherein said conductive fluid comprises an antihyperhidrosis active substance.

53. A device for introduction of water to a skin portion of a subject, the device comprising:

a dermal patch comprising an electrochemical cell wherein said electrochemical cell is a flexible thin layer open liquid state electrochemical cell which comprises a first layer of insoluble negative pole, a second layer of insoluble positive pole and a third layer of aqueous electrolyte, said third layer being disposed between said first and second layers and including:

(a) a deliquescent material for keeping the open cell wet at all times;

(b) an electroactive soluble material for obtaining required ionic conductivity; and

(c) a water-soluble polymer for obtaining a required viscosity for adhering said first and said second layers to said third layer,

having at least two electrodes positioned on one side of the dermal patch, said electrodes being for forming electrical contact with the skin portion of the subject; and said patch being designed and configured for delivering an electric current through the skin, said electric current being for introduction of water to the skin
5 portion of the subject.

54. A device for treatment of hyperhidrosis, the device comprising:
a dermal patch comprising an electrochemical cell having at least two electrodes positioned on one side of the dermal patch, said electrodes being for forming
10 electrical contact with the skin portion of the subject; and said patch being designed and configured for delivering an electric current through the skin, said electric current being for delivery of ions into the skin portion of the subject and for treatment of hyperhidrosis.

15 55. A device for treatment of hyperhidrosis, the device comprising:
a dermal patch comprising an electrochemical cell where in said electrochemical cell is a small and thin electrochemical cell having at least two electrodes positioned on one side of the dermal patch, said electrodes being for forming electrical contact with the skin portion of the subject; and said patch being
20 designed and configured for delivering an electric current through the skin, said electric current being for delivery of ions into the skin portion of the subject and for treatment of hyperhidrosis.

56. A device for treatment of hyperhidrosis, the device comprising:
25 a dermal patch comprising an electrochemical cell where in said electrochemical cell is a flexible thin layer open liquid state electrochemical cell which comprises a first layer of insoluble negative pole, a second layer of insoluble positive pole and a third layer of aqueous electrolyte, said third layer being disposed between said first and second layers and including:

- 30 (a) a deliquescent material for keeping the open cell wet at all times;
(b) an electroactive soluble material for obtaining required ionic conductivity; and

- (c) a water-soluble polymer for obtaining a required viscosity for adhering said first and said second layers to said third layer,

having at least two electrodes positioned on one side of the dermal patch, said electrodes being for forming electrical contact with the skin portion of the subject; and said patch being designed and configured for delivering an electric current through the skin, said electric current being for delivery of ions into the skin portion of the subject and for treatment of hyperhidrosis.

57. An iontophoretic patch for transdermal or intradermal delivery of at least one substance, the patch comprising:

- (a) an electrochemical cell for powering said patch;
(b) at least two electrodes in electrical contact with said electrochemical cell; and
(c) a conductive fluid, wherein said conductive fluid is preapplied to said at least two electrodes;

and wherein on contacting said patch with skin an electric current is delivered through said conductive fluid and skin of a subject so as to transdermally or intradermally deliver said at least one substance.

58. The patch of claim 57, wherein said conductive fluid is aqueous hydrogel.

59. The patch of claim 57, wherein said one substance is water.

60. The patch of claim 57, wherein said one substance is an antihyperhidrosis active substance.

61. An iontophoretic patch for transdermal or intradermal delivery of water, the patch comprising:

- (a) an electrochemical cell for powering said patch;
(b) at least two electrodes in electrical contact with said electrochemical cell; and

(c) an aqueous conductive fluid, wherein said aqueous conductive fluid is preapplied to said at least two electrodes; and wherein on contacting said patch with skin an electric current is delivered through said aqueous conductive fluid and skin of a subject so as to

5 transdermally or intradermally deliver water from said aqueous conductive fluid.